

RANGE EXTENSION FOR QUERCUS DUNNII IN CENTRAL CALIFORNIA.—*Quercus dunnii* Kell. (*Q. palmeri* Engelm.) is a divaricately branching shrub with hard, spinose-dentate leaves. It occurs in xeric chaparral or pinyon-juniper woodland in small, widely disjunct populations in Arizona, southern California, and northern Baja California. In the more xeric parts of its range, as in central Arizona, it may be associated with desert plants such as *Canotia holacantha*, *Opuntia engelmannii*, *Glossopetalon nevadense*, *Ephedra viridis*, and *Yucca baccata*. However, at the Peachy Canyon location in California, heretofore considered to be its northern (and western) limit, it occurs under considerably more mesic conditions with *Q. agrifolia*.

The distribution of *Q. dunnii* in Arizona is presented elsewhere (Tucker and Haskell, *Brittonia* 12:196–219, 1960). Its known range in Baja California extends just south of the Sierra San Pedro Mártir (R. Moran, pers. comm.: west of Agua Amarga, 1100 m, near 30° 28' N, 115° 17' W, *Moran 11416*). In southern California it occurs principally along the western borders of the Colorado and Mohave Deserts in Riverside, San Bernardino, and Los Angeles Counties. To the east, it first re-occurs in the Hualapai Mountains in Mohave County, Arizona. However, a late Pleistocene record has recently been discovered in the Newberry Mountains in extreme southern Nevada (Leskinen, *Madroño* 23:234, 1975).

In October 1974, J. R. Griffin found *Q. dunnii* in Clear Creek Canyon, a tributary of the upper San Benito River in southeastern San Benito County. The locality is 36° 22' 20" N and 120° 43' 50" W; on the U.S.G.S. 15' New Idria quadrangle it appears near the southeastern corner of section 11, T. 18 S., R. 11 E. This extends the known range of *Q. dunnii* 82 km north of Peachy Canyon, west of Paso Robles, San Luis Obispo County.

An old bulldozer trail to the Alpine mercury mine runs by the colony. The county road from Hernandez to New Idria (Clear Creek Road) passes within sight of the colony 350 m away. The main slope of Clear Creek Canyon faces northwest here, and the *Q. dunnii* shrubs are on the shady side of a ravine running down the slope at an elevation of 960 m. The surrounding vegetation is a "serpentine" chaparral dominated by *Q. durata* with lesser amounts of *Arctostaphylos glauca* and *A. pungens*. Trees of *Pinus sabiniana* are scattered in the brush. The *Q. dunnii* shrubs appear to be on an outcrop of Franciscan sediments within the generally serpentine region. The non-serpentine influence around the colony is evident by the presence of *Cercocarpus betuloides*, *Q. turbinella* ssp. *californica*, and *Juniperus californica*. *Yucca whipplei* is scattered on rocky openings, and *Chrysothamnus nauseosus* ssp. *mohavensis* is abundant along the bulldozer trail and other disturbed spots.

The *Q. dunnii* population (Tucker 4342, 4343; Griffin 3928) is extremely localized at Clear Creek; several dozen stems, 2–4 m tall, are involved in the main group. Several smaller individuals have started nearby, possibly since the bulldozer trail was built, and a single large spreading shrub occurs a short distance up slope. *Quercus dunnii* may grow elsewhere in Clear Creek Canyon, but if so the species must be very inconspicuous. Griffin (*Fremontia* 2(1):11–15, 1974; U.S. Forest Service Research Paper PSW-, in press) explored the region intensively before stumbling onto this colony.

The Clear Creek *Q. dunnii* shrubs are separated from a tiny population of the closely related species, *Q. chrysolepis*, by only 1.45 km. The *Q. chrysolepis* trees (Tucker 3657) also grow near Franciscan outcrops in a narrow gorge farther up Clear Creek. *Quercus chrysolepis* is essentially absent from the serpentinized portions of the San Benito Mountain region although scattered in chaparral on high ridges of the Diablo Range on non-serpentine rocks. This is as close as the two species come to co-existing of any place in California known to us. However, unlike the situation in central and southeastern Arizona, where these oaks have hybridized freely (Tucker and Haskell, op. cit.), in Clear Creek Canyon there is no evidence of introgression in either species.—J. R. GRIFFIN, Hastings Reservation, Carmel Valley, California 93924 and J. M. TUCKER, Botany Department, University of California, Davis 95616.